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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/183,819	10/30/98	BAKER	T 60980005DXH9

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INTELLECTUAL PROPERTY ADMINISTRATION
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EXAMINER

HUFFMAN, J

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 02/14/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/183,819	Applicant(s) BAKER ET AL.	
	Examiner Julian D. Huffman	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 and 42-49 is/are pending in the application.
- 4a) Of the above claim(s) 37-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 and 42-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claims 37-41 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 1998 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 20) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: group 1, claims 1-25 and group 2, claims 37-41.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claims 26-36 and 42-49 appear to be generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the

case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

During a telephone conversation with Peter Lippman on January 23, 2001 a provisional election was made without traverse to prosecute the invention of Group 1, claims 1-25 (generic claims being claims 26-36 and 42-49, and group 2 being claims 37-41). Affirmation of this election must be made by applicant in replying to this Office action. Claims 37-41 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

Fig. 2, element 45, Fig. 4, elements 21 and 27, figs. 5-6, element 35, fig. 8, elements 83' and 76', fig. 10, elements 152 and 182-183, fig. 11, elements 281-283, 286, 291, 252, fig. 12, elements 383-386, 384, 383', 352 and 391, fig. 13, elements 493, 452, 486, 485, 483, 495, 491-492, 494, fig. 16, elements 692-696, 652, 671, 670, 661, 562, 686, 691, 676, 683, 689, figs. 19a-21, element 19A, figs. 22-23, element 952 and figs. 24-26, elements 1063, 1065, 1053 and 1181.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: element 3, as mentioned on page 36, line 26.

Correction is required.

Specification

3. The specification is objected to because of the following informalities, corrections are suggested where appropriate:

Page 10, lines 1-3 are unclear.

Page 10, line 27, change "suggest" to - - suggests - -.

Page 30, line 19, change "employ" to - - employs - -.

Page 34, line 10 is unclear.

Page 35, line 1, change "appears" to - - appear - -.

Page 39, line 27, change "too" to - - also - -.

Page 49, lines 7-8 are unclear.

Appropriate correction is required.

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4. The abstract of the disclosure is objected to because of its length. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 26-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites the limitation "the quality of images" in lines 26-27. There is insufficient antecedent basis for this limitation in the claim.

Claims 27-36 are rejected as being dependent upon a rejected base claim, claim 26.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp (U.S. Patent 5,883,646) in view of Vincent (U.S. Patent 5,671,059).

Beauchamp discloses an incremental printer for forming desired images on a printing medium, by construction from individual marks in arrays; said printer comprising:

at least one colorant-placing module for marking on the medium (fig. 2, any one of elements 302, 304, 306, or 308); and

a first sensor for determining condition or relative positioning of the at least one colorant-placing module (element 400).

Beauchamp does not disclose a second sensor for making color measurements.

However, Vincent discloses a sensor which may be mounted to a carriage for making color measurements (column 4, lines 36-56).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the sensor disclosed by Vincent into the invention of Beauchamp for the purpose of detecting color value printing errors for correction purposes (column 4, lines 36-46).

9. Claims 3-5, 8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent as applied to claim 1 above and further in view of Hirano et al. (U.S. Patent 5,018,884)

Beauchamp in view of Vincent do not disclose that the second sensor is mounted independently of the first sensor.

However, Hirano et al. provides a general teaching for solving a similar problem as the applicant, that is, providing two modes, the first mode allowing one carriage mounted device to traverse along the print media and the second mode allowing a second device mounted on a separate carriage to be attached to the first carriage such that both devices may be traversed along the print media (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Hirano et al. into the invention of Beauchamp in view of Vincent, thereby employing the use of the dual separable/attachable carriages taught by Hirano et al. and, instead of mounting both sensors "on" the same carriage, mounting one sensor on each carriage, for the purpose of, as taught by Hirano et al., allowing the use of two modes, one where both carriages are required to be traversed along the print media and another where only one carriage is required.

10. Claims 6-7, 9, 19-20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent as applied to claim 1 above and further in view of Vincent (U.S. Patent 5,272,518).

Beauchamp in view of Vincent '671 do not disclose a hood for covering the device, or a mechanism for advancing the sensor into contact with the media.

Vincent '518 discloses the use of a hood surrounding a colorimeter for excluding ambient light from the sensor (column 9, lines 33-38).

With regards to claims 6 and 9, it appears that the hood disclosed by Vincent is non-movable as it is attached to the device and it appears that the device is placed by the user over the region where measurements are desired to be taken. The hood performs the same function as the applicant's hood, in that it blocks ambient light, and further Vincent discloses that it should extend from the housing to the plane to be measured. Thus, any modification to the hood which would make it adjustable or provide a means for automatically adjusting the hood so that it is in contact with the media, would have been obvious to one having ordinary skill in the art, since it has been held that simply making a device adjustable, or automatic, requires only routine skill in the art (*In re Stevens*, 101 USPQ 284 (CCPA 1954), *In re Venner*, 120 USPQ 192).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Vincent '518 into the invention of Beauchamp in view of Vincent for the purpose of preventing stray light from interfering with the detection process.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent as applied to claim 1 above and further in view of Bauer et al. (U.S. Patent 5,255,009).

Beauchamp in view of Vincent do not disclose a means for presenting at least one color reference target to the second sensor.

However, Bauer et al. discloses a means for presenting a reference target to an optical sensor (columns 8-9, lines 5-16, 47-68 and 1-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bauer et al. with the invention of Beauchamp in view of Vincent for the purpose of determining the characteristics of colorant-placing modules (column 1, lines 64-67).

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent and Hirano et al. as applied to claim 14 above and further in view of Bauer et al.

Beauchamp in view of Vincent do not disclose that the second carriage holds a reference target for presentation to the sensor.

However, Bauer et al. discloses a means for presenting a reference target to an optical sensor (columns 8-9, lines 5-16, 47-68 and 1-8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bauer et al. with the invention of Beauchamp in view of Vincent for the purpose of determining the characteristics of colorant-placing modules (column 1, lines 64-67).

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent, Hirano et al. and Bauer et al. and further in view of Ciza et al. (U.S. Patent 5,568,266).

Beauchamp in view of Vincent, Hirano et al. and Bauer et al. do not disclose that the reference target is a colorimetric reference target.

However, Ciza et al. discloses a colorimeter that uses colorimetric reference targets (column 10, lines 3-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Ciza et al. into the inventions of Beauchamp and Bauer et al. for the purpose of calibrating the device using reference values (column 10, lines 12-15).

14. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent and Hirano et al. as applied to claim 14 above and further in view of Vincent (U.S. Patent 5,272,518).

Beauchamp in view of Vincent and Hirano et al. do not disclose a hood for covering the device.

Vincent '518 discloses the use of a hood surrounding a colorimeter for excluding ambient light from the sensor (column 9, lines 33-38).

It appears that the hood disclosed by Vincent is non-movable as it is attached to the device and it appears that the device is placed by the user over the region where measurements are desired to be taken. However, the device performs the same function as the applicant, in that it blocks ambient light, and further Vincent discloses

that it should extend from the housing to the plane to be measured. Thus, any modification to the hood which would make it adjustable or provide a means for automatically advancing the hood, would have been obvious to one having ordinary skill in the art, since it has been held that simply making a device adjustable, or automatic, requires only routine skill in the art (*In re Stevens*, 101 USPQ 284 (CCPA 1954), *In re Venner*, 120 USPQ 192).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Vincent '518 into the invention of Beauchamp in view of Vincent and Hirano et al. for the purpose of preventing stray light from interfering with the detection process.

15. Claims 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent and Vincent (U.S. Patent 5,272,518) as applied to claims 19 and 23 above and further in view of Thermagon, Inc.

Beauchamp in view of Vincent and Vincent disclose the invention of claims 21 and 24 with the exception of providing a compliant material for facilitating an effective contact between the hood and the medium.

However, Thermagon, Inc. discloses a compliant material which has the ability to maintain contact between two devices over a wide range of temperatures and pressures.

It would have been obvious to one having ordinary skill in the art to use compliant material similar to that disclosed by Thermagon, Inc. in the invention of Beauchamp in

view of Vincent and Vincent for the purpose of maintaining contact between the hood and paper thereby preventing external light from interfering with the detection process.

16. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Vincent and Vincent (U.S. Patent 5,272,518) as applied to claim 19 above and further in view of Bauer et al. (U.S. Patent 5,255,009).

Beauchamp in view of Vincent and Vincent do not disclose a door for protecting the sensor when not in use and a means for opening the door for measurements.

However, Bauer et al. discloses a door covering an optical device when not in use (column 6, lines 49-57 and Fig. 1).

Bauer et al. does not expressly disclose that the door has a means for opening or closing it, presumably the operator opens or closes the door.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the door open or close automatically since it has been held that providing an automatic means to replace a manual activity requires only routine skill in the art. *In re Venner*, 120 USPQ 192.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bauer et al. into the invention of Beauchamp in view of Vincent and Vincent for the purpose of protecting the device when not in use.

17. Claims 26-30, 35-36 and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Bauer et al.

Beauchamp discloses:

An incremental printing system for forming desired images on a printing medium, by construction from very large numbers of individual liquid-ink drops ejected onto such medium in arrays (fig. 1); said printer comprising:

at least one inkdrop-placing module for ejecting very large numbers of liquid-ink drops onto such medium substantially whenever the printing system is in use for forming images (fig. 1, any one of elements 302, 304, 306, or 308);

at least one sensor, having at least one optical surface, for infrequently measuring, substantially when the printing system is not in use for forming images, characteristics of ink previously received on the medium from the at least one inkdrop-placing module (element 400); and

an automatic microprocessor for using the measured characteristics in refining operation of the inkdrop-placing module, to optimize the quality of images formed on such medium thereafter (element 370, column 3, lines 40-45 and 56-59).

Beauchamp does not disclose a door.

However, Bauer et al. discloses a door for protecting the optical surface of a sensor when the sensor is not in use, thereby preventing measurement degradation, by coating of liquid ink on the at least one optical surface and further the door moves the sensor into a measurement position and the sensor has multiple optical surfaces that the door protects (Figs. 8 and 10, column 6, lines 49-57, column 8, lines 5-17 and 48-54).

Bauer et al. does not disclose that the door opens/closes automatically; however, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to have the door open or close automatically since it has been held that providing an automatic means to replace a manual activity requires only routine skill in the art. *In re Venner*, 120 USPQ 192.

With regards to claims 35-36 and 45 the door functions as a shutter, is in a plane parallel to the printing medium and slides open and shut within the plane (fig. 8, column 8, lines 5-16).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bauer et al. into the invention of Beauchamp for the purpose of protecting optical elements of the detector when not in use (column 8, lines 11-16).

With regards to claim 43, Bauer et al. discloses a reference target mounted on an optical sensor (columns 8-9, lines 47-8) and Beauchamp discloses an optical sensor mountable on a carriage.

With regards to claim 44, Bauer et al. in view of Beauchamp do not disclose a means for automatically placing the sensor over the reference target/means for moving the shutter thereby protecting the reference target, they disclose that this is done manually.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a means for automatically placing the target over the sensor/moving the shutter thereby protecting the reference target since it has been held that providing a mechanical or automatic means to replace manual activity

which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the reference target mounted on an optical sensor disclosed by Bauer et al. with the optical sensor mounted on a carriage as disclosed by Beauchamp, to obtain the invention claimed for the purpose of determining the characteristics of color-placing modules in an ink jet printer (column 1, lines 64-67).

18. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Bauer et al. as applied to claim 26 above and further in view of Vincent '059.

Beauchamp in view of Bauer et al. disclose at least two modules for placing ink and a sensor for determining relative positioning of the ink-drop placing modules.

Beauchamp in view of Bauer et al. do not disclose a sensor for measuring color properties.

However, Vincent '059 discloses a colorimeter for use in an ink jet printer for measuring color properties of printed images for calibration purposes (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Vincent '059 into the invention of Beauchamp in view of Bauer et al. for the purpose of measuring the color content to calibrate the printer (abstract).

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19. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauchamp in view of Bauer et al. as applied to claim 42 above and further in view of Ciza et al. (U.S. Patent 5,568,266).

Beauchamp in view of Bauer et al. do not disclose the reference targets claimed.

However, Ciza et al. discloses a colorimeter that uses black, gray and white reference targets (column 10, lines 3-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Ciza et al. into the inventions of Beauchamp and Bauer et al. for the purpose of calibrating the device using reference values (column 10, lines 12-15).

Allowable Subject Matter

20. Claims 32-34 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art relied upon does not disclose a reference pattern placed on the door of an optical measuring device.

Conclusion

21. U.S. Patent 4,037,970 to Webster et al. is being provided as evidence of the current state of the art. Column 5, lines 56-63 disclose a drawer which holds both a reference pattern and a sample pattern. When the drawer is opened, the reference pattern is placed under a sensor and when the drawer is closed, the sample to be measured is placed under the sensor.

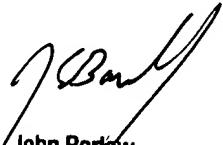
22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (703) 308-6556. The examiner can normally be reached on Monday through Friday from 8 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

February 8, 2001

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John Barlow
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